

# HOW TO:

# BUILD A 3-BIN COMPOSTER

SIMPLE PROJECTS FOR CONSERVATION

THE IZAAK WALTON LEAGUE OF AMERICA

Whether you have an abundance of lawn clippings or want to keep table scraps out of the landfill, you can easily turn waste into useful compost – and help the environment in the process.

According to the U.S. Composting Council, composting organic waste such as manure or grass clippings can put nutrients back in the soil rather than in water run-off. Composting also improves the water dynamics of soil, including its water-holding capacity, and can be used to clean and restore contaminated soils.

Have a lot of compost? Offer it free to the community and encourage composting to stabilize soils. Or turn this project into a chapter fundraiser by making and selling 3-bin composters.

## Composter Materials

- Four 12' 2x4s
- Two 10' 2x4s
- One 10' construction-grade 2x4
- One 16' length of 2x6 lumber
- Six 8' lengths of 1x6 lumber
- A 22' length of 36"-wide half-inch hardware cloth (galvanized mesh)
- 16d galvanized nails (2 pounds)
- Poultry wire staples (250)
- Twelve 1/2" carriage bolts, 4" long, with washers and nuts
- One quart wood preservative or stain

## Lid Materials (Optional)

- One 4-x-8' sheet of 1/2" exterior plywood
- One 4-x-4' sheet of 1/2" exterior plywood
- Six 3" zinc-plated hinges
- Twenty-four 3/16" galvanized steel bolts, with washers and nuts (to attach the hinges)

*Instructions reprinted with permission from Composting to Reduce the Waste Stream (NRAES-43). 1991. Natural Resource, Agriculture, and Engineering Service.*

## REQUEST TO READERS

If you build a project based on this or other Outdoor America articles, or if you have an idea for a good conservation project, please e-mail us at [info@iwla.org](mailto:info@iwla.org).

ILLUSTRATIONS BY BOB DRY/WWW.BOBDRY.COM



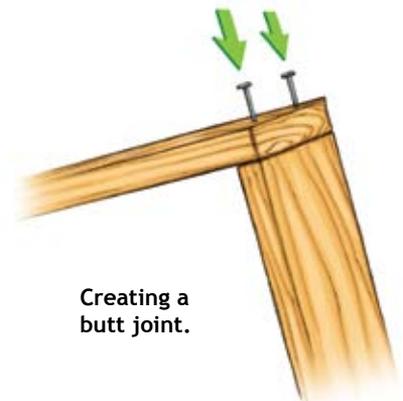
**Step 1:** Cut two 31½" pieces and two 36" pieces from one 2x4. Butt-joint and nail the pieces into a 35x36" almost-square. Repeat with the other 12' 2x4s until you have four "squares."

**Step 2:** Cut four 37" lengths of the mesh hardware cloth. Fold back the edges of the mesh approximately 1/2" on each side. Stretch a piece of mesh across each "square" frame and staple the mesh tightly every 4 inches around the edge of each frame. The wood and wire frames will be the ends and dividers for your composter.

**Step 3:** Set two of your "square" frames on end, 9' apart and parallel to each other. Position the other two frames so they are parallel to and evenly spaced between the end dividers. (Place the 36" sides of the frames on the ground.)

**Step 4:** Cut a 9' piece from each standard 10' 2x4. Place the 9' boards across the tops of the dividers so that each is flush against the outer edges.

**Step 5:** Through each junction of board and divider frame, drill a 1/2" hole centered 1" from the outside edge. Secure the boards with carriage bolts, but do not tighten the nuts completely yet. Turn the unit over so that the 9' boards are on the bottom.



Creating a butt joint.



Securing the boards with carriage bolts (shown here without mesh on frame).



## Compost Basics

**Balanced Diet:** Combine high-carbon materials like paper, wood chips, and leaves with high-nitrogen materials like food scraps, grass clippings, and manure. Strive for around a 5:1 ratio of carbon to nitrogen material.

**Scrap Size:** Small particle size ensures your compost items will decompose.

**Water Works:** Moisture is critical to the composting process. Use the “squeeze test” to measure the moisture level. If water droplets come out when you squeeze the compost, it’s too wet — add straw or sawdust. If the compost feels dry, add water. If the water level is just right, it will feel damp but not drippy.

**Hot Zone:** Temperatures between 90° and 140°F are ideal for breaking down compost materials. Turning compost regularly will help heat all parts of the compost pile.

**Odor Patrol:** To keep odors to a minimum, dry the grass clippings before adding them to a bin and cover food with compost.

**Step 6:** Cut one 9’ piece from the 10’ construction-grade 2x4. Attach this 9’ board to the back side of the top of the composter using the process in Step 5. With a carpenter’s square, or by measuring between opposing corners, make sure the bin is square. Tighten all the carriage bolts securely.

**Step 7:** Fasten a 9’ length of mesh hardware cloth to the back side of the bin, with staples every 4 inches around the frame.

**Step 8:** Cut four 36”-long pieces from the 16’ length of 2x6 lumber for front runners. (Save the remaining 4’ length.) Rip-cut two of these boards to two 4¾”-wide strips (save the two remaining strips).

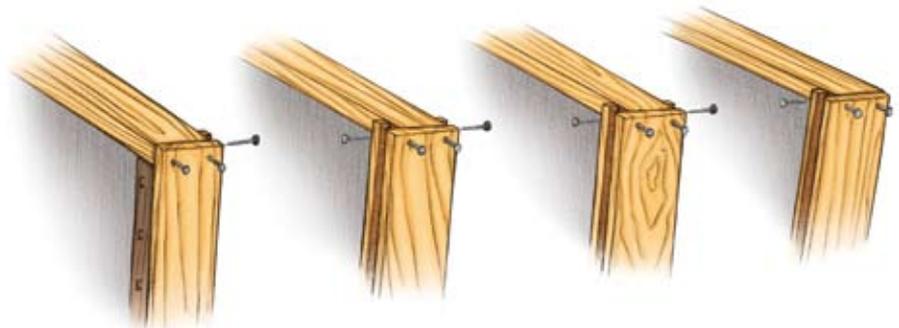
**Step 9:** Nail the 4¾”-wide strips to the front of the outside dividers and baseboard so they are flush on the top and outside edges. Center the two remaining 6”-wide boards on the front of the inside dividers flush with the top edge and nail securely.

**Step 10:** Cut the remaining 4’ length of 2x6 lumber into a 34”-long piece, and then rip-cut this piece into four equal strips. Trim the two strips saved from Step 8 to 34”. Nail each 34” strip to the insides of the dividers so that they are parallel to — and 1” away from — the boards attached to the front. This creates a 1” vertical slot on the inside of each divider.

**Step 11:** Cut the six 8’ lengths of 1x6’ lumber into 18 slats, each 31¼” long. Insert the horizontal slats, six per bin, between the dividers and into the vertical slots. This creates an adjustable and removable front to each bin.

**Step 12:** Stain the wood.

**PUT A LID ON IT:** Although lids are optional, they will help keep outdoor critters out of your compost. Cut the 4x8’ sheet of exterior plywood into two 3x3’ pieces. Cut the 4x4’ sheet of plywood into one 3x3’ piece. Attach each 3x3’ piece of plywood to the back of the compost bins using two hinges per top. A 1” overhang provides a place to grab and open the lids, or you can add a handle to the top of each lid.



Creating the vertical slots on each divider.